

offered to her and there was always plenty of food in the tank. She was first seen to catch fish in the tank on 3rd May. About this time also, she started leaving the west end of the tank and venturing out into the open water expanse, with the other crocodiles.

The 13 year old female mugger at the Snake Park which laid on 20 February guarded her nest from a pool in the west corner of the enclosure. She made serious charges at intruders, followed by a furious chase which brought the man to the other side of the wall. (Alpha had been more inclined to reach her nest only, and belly flop on it). It is a matter for conjecture whether the intruder would be bitten if caught up with. W. T. Neill (LAST OF THE RULING REPTILES) doubts that the American Alligator bites in similar circumstances and there are no records of mugger actually biting in nest defence. However in Orissa there are two authentic records of gharial having done this.

After half the incubation period was over the

MADRAS CROCODILE BANK,  
MADRAS,  
July 4, 1977.

Snake Park female suddenly directed her protective instincts to the southern corner of the enclosure, charging at any disturbance there and allowing the actual nest to be approached with impunity. As late as 20 May she rushed out open mouthed when this area was approached. This disorientation was perhaps caused by our forceful prevention of her access to the nest while humidity and temperature checks were being taken.

Male mugger have not thus far been reported to participate in nest protection. On two occasions during incubation, Beta was seen to stay in the water below the nest when Alpha took a short turn in the open tank. However this might be pure coincidence. But Mett's repeated lunges and attacks while the juvenile was being caught, and the male mugger's active response to the distress cry of the young are significant and indicate perhaps a higher degree of protective interest than we believe.

ZAHIDA WHITAKER  
ROMULUS WHITAKER

## 16. GROWTH RATE OF *CROCODYLUS PALUSTRIS*

From June 1975, 71 hatchlings from wild collected and captive bred marsh crocodile nests were reared at the Madras Crocodile Bank. For the first three months they received live tadpoles, live small fish and chopped fish. The living tadpoles and fish were added to the rearing ponds to maintain a density suitable for easy capture. The finely chopped fish was put on large leaves at night to ensure that even hatchlings unsuccessful at catching live prey would feed. In addition a sixty watt light bulb was kept in the hatchling enclosures to attract

insects at night. As seems to be true of most animal groups reared together, a few grow exceptionally rapidly, a few extremely slowly and the majority at an average rate (see table).

At the time of writing these crocodiles are two years old and up to 1.7 metres in length or a growth rate of up to 6 cm. per month. One often sees captive reared crocodiles in a very stunted condition; in fact many people who should know better maintain that crocodiles only grow 30 cm a year. Given the right diet, sufficient cover and sunlight in a spacious

enclosure the growth rate of young crocodiles will be optimum, even better than that in wild crocodiles.

P.E.P. Deraniyagala, in TETRAPOD REPTILES OF CEYLON, 1941 gives the following growth rate of *C. palustris* (1 specimen)

			Length (cm)	Weight (gm)
Hatchling	September,	1934	25.5	70
Yearling	June,	1935	41	230
2 Year old	May,	1936	47.7	478

The following are mugger growth rates at Madras Crocodile Bank (71 and later, 56 specimens).

		Length (cm)	Girth (cm)	Weight (Kg)
		Range/ Average	Range/ Average	Range/ Average
Hatchling	June 1975	26-31/28	—	—
Yearling	June 1976	57-104/82	22-41/32	—
2 Year old	June 1977	90-170/130	32-70/50	3.5-12/8

MADRAS CROCODILE BANK,  
MADRAS-600 022,  
June 9, 1977.

R. WHITAKER  
Z. WHITAKER

### 17. BREEDING RECORD OF THE INDIAN CHAMELEON (*CHAMELEO ZEYLANICUS*)

A female Indian chameleon laid 24 eggs at Madras Snake Park on 15.xii.75. Other females laid 33, 28, and 22 eggs. The eggs were average of 16 mm long. They were incubated in slightly damp, sterile sand in a plastic box with air holes. Most spoiled but several baby chameleons hatched 81 days later on March

6th. These measured about 3 cm including the tail and were subsequently released. Chameleons have been regularly observed mating at Madras Snake Park in late September and October. A good account of chameleon breeding is given by Trench (*JBNHS* 21, pp. 687-89).

MADRAS SNAKE PARK,  
MADRAS-600 022,  
June 7, 1977.

R. WHITAKER